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UTAH DEPARTMENT OF NATURAL RESOURCES
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Plate 1
Utah Geological and Mineral Survey Map 81
Geologic Map of the Fremont Pass Quadrangle

Base from U.S. Geological Survey: Fremont Pass Quadrangle, 1966

SCALE 1:24 000

1 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 5 0 1 KILOMETER

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 20-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

GN MN
0°53' 16 MILS
15½° 276 MILS
UTM GRID AND 1966 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

GEOLOGIC MAP OF THE FREMONT PASS QUADRANGLE, IRON AND GARFIELD COUNTIES, UTAH

by
John J. Anderson and Timothy C. Grant
U.S. Geological Survey

1986

UTAH
QUADRANGLE LOCATION

Field mapping by authors in 1964, 1968-69
Field checked 1983-84

K.D. Brown and D.A. Jenkins, Cartographers

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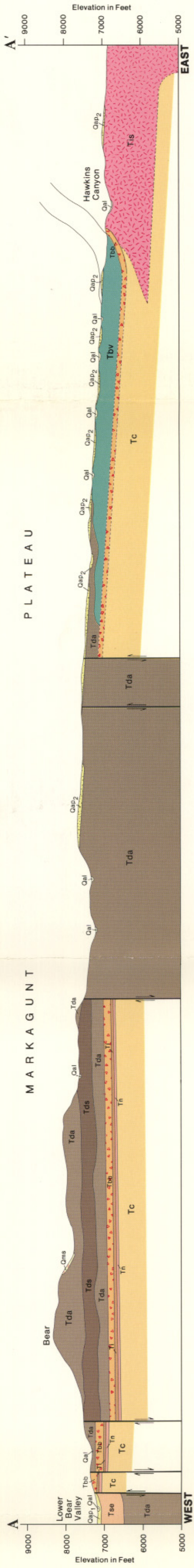
Plate 2
Utah Geological and Mineral Survey Map 81
Geologic Map of the Fremont Pass Quadrangle

FORMATION		SYMBOL	LITHOLOGY	THICKNESS feet (meters)
Surficial deposits		Qal Qan Qpm Qms Qap_1 Qap_2		0-100 (0-31)
Sevier River Formation		Tse		0-250 (0-76)
MOUNT DUTTON FORMATION	Alluvial facies	Tda		1500+ (458+)
	Undivided	Tdu		
	Vent facies	Tdv		
	Local Sandstone unit	Tds		
Bear Valley Formation		Tbv		Tbv 0-500 (0-153)
Kingston Can. Tuff Mbr. of Mt. Dutton Fm.		Tdk		Tdk 0-15 (0-5)
Buckskin Breccia		Tbb		Tbb 0-300 (0-92)
Isom Formation		Ti		Ti 0-30 (0-9)
Needles Range Fm.		Tn		–
Claron Formation		Tc		0-650
Spry intrusion		Tis		
Formation		Tc		(0-198)



DESCRIPTION OF MAP UNITS

QUATERNARY

Qal — Alluvium—*Unconsolidated silt, sand, and gravel along active streams and washes.*

Qan — Floodplain and channel deposits—*silt, sand, and gravel, locally cobbly and bouldery.*

Qpm — Playa lake deposits—*lacustrine clay, silt, and sand.*

Qms — Landslide debris—*disaggregated rock and surficial deposits.*

Qap_1 — Piedmont slope deposits—*poorly sorted, unconsolidated silt, sand, and gravel on sloping surfaces from deposition (alluvial fans) and erosion (pediments).*

Qap_2 — Older piedmont slope deposits—*poorly to moderately indurated, poorly sorted silt, sand, and gravel mantling pediment remnants.*

UNCONFORMITY

TERTIARY

Tse — Sevier River Formation—*poorly to moderately consolidated, light-gray, tan, pinkish-gray, and white silty-pebbly sandstone and conglomerate with local air-fall tuffs.*

UNCONFORMITY

Mount Dutton Formation

Tda — Alluvial facies—*gray and brown, dacitic to andesitic volcanic mudflow-breccia, conglomerate, and tuffaceous sandstone, with subordinate lava flows and autoclastic flow-breccia.*

Tdu — Undivided, mixed vent and alluvial facies.

Tdv — Vent facies, flow breccia.

Tds — Sandstone member—*soft, light-gray, yellow or tan, cross-bedded, zeolite-cemented tuffaceous sandstone.*

Tis — Spry intrusion—*light-gray to reddish-orange quartz latite porphyry, with phenocrysts of plagioclase, amphibole, minor quartz and biotite in a groundmass of microcrystalline feldspar and quartz.*

Tdk — Kingston Canyon Tuff member—*resistant, pale purple, plagioclase-biotite vitric welded tuff.*

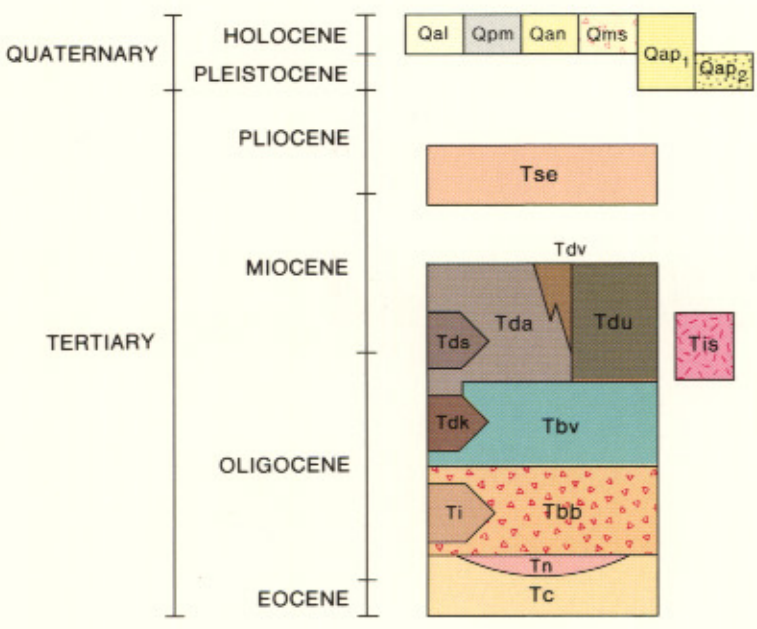
Tbv — Bear Valley Formation—*weak, cross-bedded, pale- to dark-gray and greenish-gray, zeolite-cemented, tuffaceous sandstone.*

Tbb — Buckskin Breccia—*moderately resistant, gray to grayish-pink, lithic-crystal ash-flow tuff.*

Ti — Isom Formation—*ledge-forming, pale red, reddish-purple, and reddish-purplish-gray, densely welded vitric-crystal ash-flow tuff.*

Tn — Needles Range Formation—*crystal-rich ash-flow tuff; appears only on cross section.*

Tc — Claron Formation—*well-bedded, argillaceous, freshwater limestone, calcareous siltstone and shale, sandstone, and subordinate conglomerate.*



CONTACT
Dashed where approximately located

FAULT
Dashed where location inferred; dotted where covered; bar and ball on downthrown side

15
STRIKE AND DIP OF BEDS

IDENTIFIABLE STRUCTURAL LINEAMENT

JOINT SET
Orientation of prominent sub-vertical joint set in the Spry intrusion

25
LINEATIONS AND SLICKENSIDES
Bearing and plunge of lineations and slickensides in the Spry intrusion